The Most **Reliable**
Storage For Industries

ST180-25
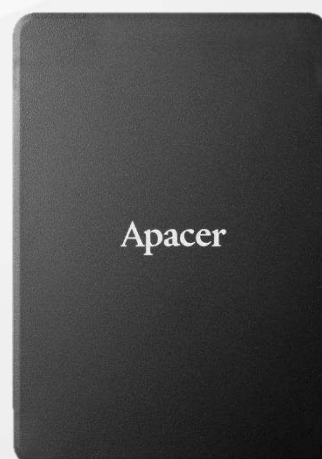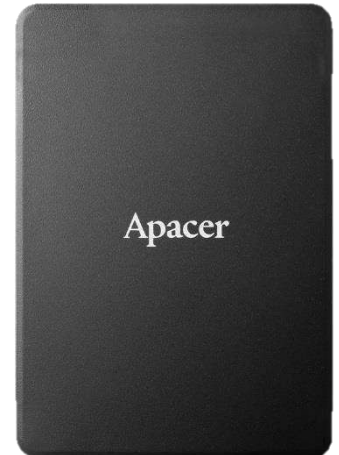
ST180-25

Overview

Apacer's ST180-25, utilizing 3D NAND for higher capacity up to 8TB and providing more power efficiency than 2D NAND, is a well-balanced solid-state disk (SSD) drive with standard form factor and great performance. Designed in SATA 6 Gb/s interface, ST180-25 provides full compliance with the SATA Revision 3.1 interface specifications and delivers exceptional read/write speed. For data efficiency, the internal controlling unit of the SSD is engineered with DRAM for enhanced random performance, making it the ideal companion for heavy-loading industrial or server operations.

ST180-25 is built with a powerful SATA controller that supports on-the-module ECC as well as efficient wear leveling scheme and implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability. Furthermore, ST180-25 is equipped with a built-in thermal sensor to monitor the temperature of the SSD via S.M.A.R.T commands and configured with thermal throttling to dynamically adjust frequency scaling to enhance data reliability and provide sustained performance while overheating. Operating under 6 Gb/s interface, ST180-25 is provided with Apacer latest S.M.A.R.T. that is primarily oriented for the latest SATA interface SSD, for drive lifetime monitoring and analysis. For highly-intensive applications, End-to-End Data Protection ensures that data integrity can be assured at multiple points in the path to enable reliable delivery of data transfers.

Security-wise, Advanced Encryption Standard (AES) ensures data security and provides users with peace of mind knowing their data is safeguarded against unauthorized use at all times. ST180-25 also adopts the latest page mapping file translation layer and comes with various implementations including power saving modes, wear leveling, flash block management, S.M.A.R.T., power failure management, TRIM, DataRAID™ and SMART Read Refresh™. With exceptional performance, trustable reliability and enhanced data protection, ST180-25 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

Features

- Supports large capacity of up to 8TB

- Adopts advanced LDPC ECC engine with 3D NAND flash memory to improve reliability

- Global Wear Leveling

- Flash bad-block management

- Flash Translation Layer: Page Mapping

- Supports SSDWidget and S.M.A.R.T function

- Power Failure Management

- AES 256-bit hardware encryption

- End-to-End Data Protection

- ATA Secure Erase

- TRIM Support

- Hyper Cache Technology

- SMART Read Refresh™

Specifications

Model	ST180-25
Interface	SATA 3.1 (6Gb/s)
Connector	(7+15) pin male
Form Factor	2.5"
NAND Flash Type	3D TLC
Capacity	4TB~8TB
External DRAM	Yes
Sustained Read Performance (MB/sec)	Up to 555
Sustained Write Performance (MB/sec)	Up to 520
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	82K
Standard Operating Temperature (°C)	0 ~ + 70
Extended Operating Temperature (°C)	-40 ~ + 85
Storage Temperature (°C)	-55 ~ + 100
Thermal sensor	Yes
Shock	Operation: 50G/11ms (compliant with MIL-STD-202G) Non-operation: 1500G/0.5ms (compliant with MIL-STD-883K)
Vibration	Operation: 7.69 Grms, 20~2000 Hz/random (compliant with MIL-STD-810G) Non-operation: 4.02 Grms, 15 ~ 2000 Hz/sine (compliant with MIL-STD-810G)
Operating Voltage	5.0 V±10%
Power Consumption	Active mode: 720 mA / Idle mode: 305 mA
Dimension (L x W x H)	100.00 x 69.85 x 7.00 mm
MTBF (hours)	>3,000,000

Mechanical Specification
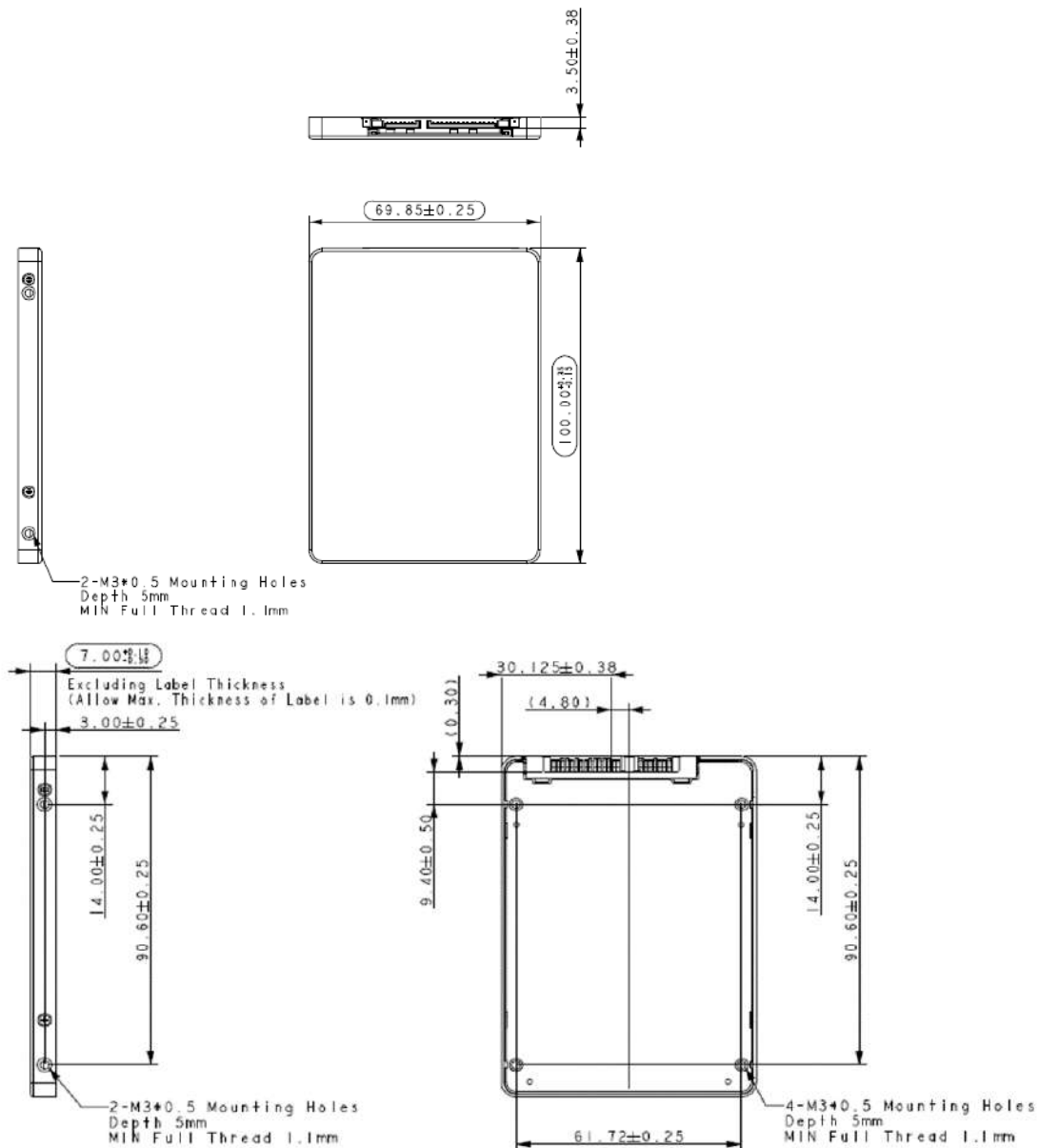
Unit: mm

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